



## BACKGROUND OF THE INVENTION

This is a divisional patent application based on U.S. Continuation Patent Application Serial No. 10/154,356 filed on May 23, 2002, now U.S. Patent No. 6,634,665 B2 issued October 21, 2003.

### Field of The Invention

The present invention relates generally to the field of wheelchairs and, more specifically, to an electrical braking system and quick release, detachable wheels for manual wheelchairs.

### Description of the Related Prior Arts

Numerous types of braking mechanisms for manual wheelchairs are known in the art. The most typical manual wheelchair brake is a manual "over center" locking device which is activated by a lever arm and, when forced into its locking position, presses a braking member against the surface of the wheelchair tire creating a frictional braking action. Several factors mitigate against the usefulness and reliability of these types of brakes. Loss of tire pressure reduces the frictional force exerted by the crossbar on the tire and hence reduces the braking effect. A significant air pressure loss leaves these brakes useless. During transfer in and out of the chair, this type of brake allows the tire to slide underneath the crossbar and the wheelchair to move. Similarly, the brakes are ineffective and will not adequately hold the wheelchair on an incline.